

## ABSTRACT

An arrangement for generating a digital current measurement signal includes an analog-to-digital (A/D) converter and an impedance circuit. The A/D converter is operable to receive a voltage input signal and generate a digital output signal having a digital value representative of the magnitude of the voltage input signal. The impedance circuit includes at least first and second alternative impedance values and a switch operable to cause the impedance circuit to have a select one of the first impedance value and the second impedance value. The impedance circuit is configured to receive a current signal to be digitized, the impedance circuit generating an output voltage signal representative of the current signal and having a magnitude dependent on the select one of the first impedance value and the second impedance value. The output voltage signal of the impedance circuit is then provided as the voltage input signal of the A/D converter.